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**Gerardo A. Mendoza\*** ([gmendoza@temple.edu](mailto:gmendoza@temple.edu)), Department of Mathematics, Temple University, Philadelphia, PA 19122. *The b-Dolbeault complex*. Preliminary report.

Let  $M$  be the closure of a smooth bounded domain in a complex manifold. There is an involutive subbundle  $V$  of  $\mathbb{C}^b TM$  whose sections are sections of  $T^{0,1}M$  thus giving a complex of  $b$ -operators on sections of the exterior powers of  $V^*$  closely related to the Dolbeault complex. While this is not a  $b$ -elliptic complex, it can be analyzed using techniques developed for  $b$ -elliptic operators. This gives a perspective of the classical Dolbeault complex from the point of view of the  $b$ -philosophy. (Received February 25, 2007)